

QUALITY

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# Giltrap

## MIX MAX Diet Feeders



As complete Diet Feeding comes of age, Giltrap Mix Max Feeders are gaining widespread acclaim because of their ability to uniformly blend the widest range of ingredients.

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## Giltrap Mix Max Diet Feeder

Giltrap Engineering Limited have enhanced their reputable Farm Machinery range with the addition of a European designed Diet Feeder. Manufactured for the Australasian market by Giltrap Engineering under licence to the Irish firm, HiSpec Engineering, this machine is regarded worldwide as one of the best in its class.

With the introduction of complete diet feeding in the UK in the 1970's, early paddle machines represented little more than primitive adaptations of imported American and South European designs and rapidly developed a reputation for unreliability and poor mixing with UK forages.

With a watchful eye and after years of research, the HiSpec team responded by launching their unique range of Mix Max feeders using the patented angled rotary arm 'Feed-flo' mixing system. Purposely designed for longer wetter ingredients, these award winning machines rapidly gained a devoted following.

Now, with the increasing trend in New Zealand towards diet feeding, Giltrap Engineering have "picked up the ball" and proudly offer this simple, robust machine specifically designed and purpose built to accurately meet the needs of the farmer.

**Diet Flexibility:** Whether you opt to use nutritional services offered by feed suppliers, your own independent consultant, common sense or perhaps a combination of these, you can rest assured that a Giltrap Mix Max feeder gives you maximum diet flexibility. This means you can use those ingredients that suit your stock rather than being limited to those that suit your feeder. While many feeders have problems with certain ingredients that slip through the mixing system or are dispensed unevenly, Giltrap Mix Max feeders handle all types of feed, from silage, hay and straw, moist and liquid feeds to waste products from canning factories and orchardists.

### Features List

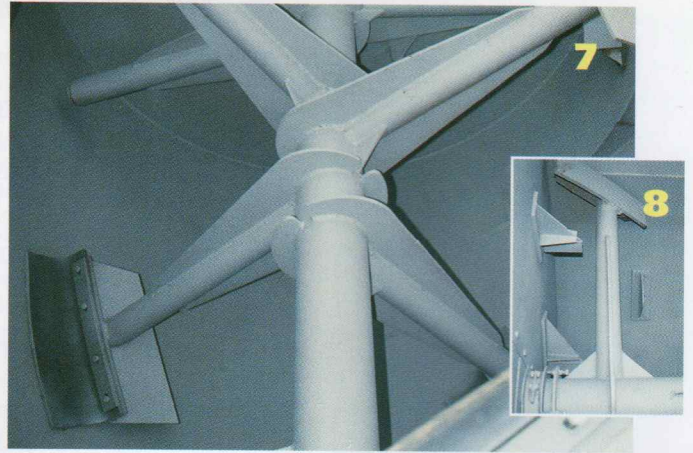
1. Precision-cut sprockets.
2. Heavy duty drive chains, instead of troublesome, expensive gearboxes.
3. Extra heavy duty bearings.
4. Variable speed conveyor with hydraulic height adjustment.
5. Hydraulically powered discharge rotor to give an even feed rate.
6. Discharge door height indicator.
7. Rugged 'Feed-flo' paddle system for accurate mixing with rubber scrapers fitted for emptying the feed.
8. Chopping knives for cutting long feeds to palatable lengths.
9. Double chassis for extra strength and accurate weighing.
10. Four point heavy duty weigh system bars.
11. Weigh system indicator for accurate weighing and ease of use.
12. Weigh system includes a mix timer.
13. Automatic oiler on all chains.
14. Central lube system.
15. Heavy duty jack.

Patent numbers 299883



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### Technical Specifications

Details	Mix Max Super 10	Mix Max Super 14
Height: Overall	2.55 metres	2.55 metres
Height: Filling	2.40 metres	2.40 metres
Wheel Track	2.50 metres	2.50 metres
Width: Overall with hydraulic cross conveyor	2.55 metres	2.55 metres
Width: Folded	2.55 metres	2.55 metres
Width: Working	2.95 metres	2.95 metres
Discharge Height	Variable to 1.2m	Variable to 1.2m
Tank Length	3.0 metres	4.0 metres
Tank Capacity	10m <sup>3</sup>	14m <sup>3</sup>
Overall Length	5.15 metres	6.15 metres
Tare Weight	4200 kg	4700 kg
Wheels	15R x 22.5	46 x 18-20
Axle Type	single	single
Brakes	optional	optional
Price		

### Potential Improvements

Milk Solids Yield (kg ms/cow)	Improvement Projected %	MS Yield (kg ms/cow)	Extra Gross Income*	
			\$/ cow / year	\$/ ha / year**
300-350	28	+84	\$268.80	\$806.40
350-400	21	+74	\$236.80	\$710.40
400-450	16	+64	\$204.80	\$614.40
450-500	10	+45	\$144.00	\$432.00

\* Based on \$3.20/kg milk solids. These are indicative figures only. Obviously final profits will be determined by supplement and running costs.

\*\* Based on 3 cows/hectare

Information kindly supplied by Newtrition Solutions  
10A The Green, Matapihi, Mt Maunganui (07) 574 9081.

Technical specifications are subject to change without prior notice.

**Remember: A New Zealand built machine means better service, better spare parts availability and a better price.**

## What do these features mean for you?

**Mixing:** A single rotor system which both mixes and feeds the ingredients, eliminating troublesome, power consuming augers. The unique Giltrap patented 'Feed-flo' mixing system is ideal for the rapid mixing of silage, hay and straw, concentrates and other alternative feeds including liquid additives. Most rations are mixed within seconds of loading the last ingredient.

**Feeding:** Variable discharge rates determined by the discharge door height and conveyor speed means you accurately control the feed to fill your troughs evenly. The discharge door can be closed and extra ingredients added at any stage during emptying. This is extremely important when small herds of animals require different rations.

**Accuracy:** Employing the expertise of an American scale manufacturer, Giltrap have opted for fitting a world recognised brand of weighing system renowned for its accuracy, advanced features and ease of use. Fast and accurate mixing of the ingredients means less waste and more efficient animal performance. The batch weighing system has a memory capable of storing mixing combinations of up to 81 recipes each containing up to 81 ingredients! Plus, the weigh system includes a mix timer to avoid possible over-mixing.

**Design:** The long lasting and simple design means low running costs, low maintenance, low depreciation and low power requirements (45 - 80 Hp depending on material and model). All bearings are mounted away from the mixing drum which protects them from damage by corrosive feed materials. Central greasing points and an automatic chain oiling system mean maintenance time is virtually non-existent!

The machine is completely protected from damage by a shear bolt on the drive input, and the wide-angle driveshaft means you can keep mixing on the move, saving valuable time.



Designed to handle all sizes of shear grab blocks with ease. This machine received the premier award for agricultural equipment at the Royal Dublin Spring Show in 1989.



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MIX MAX Diet Feeders

## Benefits of Complete Diet Feeding

### Farming System Benefits and Flexibility

1. Seasonal and environmental changes to pasture supply and quality are quickly adjusted using complete diet feeding techniques. This completes the feeding cycle to optimise your efforts in achieving good grass management and utilisation.
2. The system offers a way to minimise environmental influences and disruption to dairy cows, where pasture stand off is required to reduce pugging damage. In conjunction with sacrifice paddocks and feeding pads, this technology helps reduce weight loss, poor circulation and feed conversion efficiency losses experienced as a result.
3. The system can reduce or eliminate the need to drench minerals and anti-bloat agents by presenting them with the mixed feed instead.
4. Follow on benefits to help minimise metabolic and health problems, and poor reproductive performance can be achieved.

### Feeding Accuracy

You can accurately quantify and regulate feed and nutrient inputs per cow per day for the non-pasture diet component. The time frame to manipulate diets, herd production and health status is relatively short.

### Raw Material Handling and Presentation Benefits

1. Provides the ultimate method for incorporating liquids (eg. molasses), long chewable fibre (eg. straw and hay), powders (eg. minerals), protein energy (eg. grains) and other by-products into complete diets.
2. Allows more controlled and consistent particle size of ingredients to avoid select or choice feeding of the dietary ingredients.

3. Helps to ensure an optimum 24 hour rumen environment and nutrient profile for optimum bug nutrition and dairy cow performance. Bugs (good micro-organisms) control the bank balance - feeding them properly is a key part of your success!
4. Gains the 'synergistic effects' of combining fibre and energy inputs at the feeding source. Either component fed on its own can have detrimental effects, but together they help to enhance performance.
5. Provides the ideal mechanism to correct nutrient imbalances in key supplements such as maize silage.
6. Mineral nutrition, which is often inadequate for Australasian dairy cows can easily be corrected using complete diet feeding systems.

### Novel Ingredients

1. The Giltrap Mix Max provides a system and mechanism to reap the benefits of soda grain technology, used extensively in Europe. This provides significant benefits for improving protein yield and test, specifically in New Zealand and Australian dairying conditions.
2. Key and low-cost supplements can be effectively used in a mixed diet to provide optimum nutrition in a grass based system. These include potatoes, carrots, onions, squash, pumpkin, apple pomace, wheat by-products, avon feed, brewers grain, copra, palm kernel meal, fodder beet, etc.

### Improved Utilisation of Nutrients, Ingredients and Feed Conversion Efficiency

1. Intake of silage, hay and straw can be improved.
2. Digestibility of straw, hay and other fibrous components can be improved while still retaining the important rumen function benefits they provide.



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## Complete Diet Feeding

As complete diet feeding comes of age, attention is being focused ever more closely on machine performance. Amid such scrutiny, Giltrap Mix Max Feeders are gaining widespread acclaim, especially for their ability to blend the widest range of ingredients. Not all mixing systems are the same and nor is their performance. The Mix Max Feeder offers superior mixing because it was designed from first principles, combining merits of both paddle and auger type mixers without their respective drawbacks.

The tumbling motion of basic paddle-type mixers rotates ingredients vertically in the mixing chamber without moving them from front to back. As a result, mixing is limited and certain ingredients tend to form concentrated lumps within the mix or prove altogether unsuitable.

Bulk movement of feed by the paddles can also cause variations in weighing readout accuracy.

Auger-type mixers avoid some of these problems, but often cope badly with small mixes, require more power and may have to be running during loading. The compressing action of moving augers can also squeeze nutritionally valuable juices from the feed, only to be lost from the diet.

### The 'Feed-flo' Mixing System

Giltrap's unique 'Feed-flo' system provides the solution. Built for total reliability and unsurpassed mixing ability, the system uses staggered, angled rotary arms to gently sweep through the mixing chamber.

Feeds are moved through the feeder by a gentle folding action (like beating an egg in slow motion), so ingredients are rotated fore and aft as well as in a circular motion through the chamber.

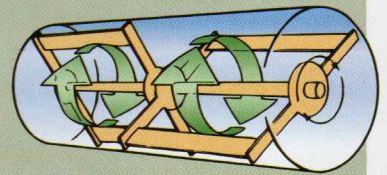
The result is a unique combination of excellent mixing, low power consumption and exceptional reliability. The finished feed is an even blend of ingredients, ensuring balanced intake and high performance.

Even energy-rich liquid feeds are cleanly incorporated into the ration and, unlike other machines, the Mix Max gives complete emptying of the blend with an even density of ingredients from start to finish.

While the 'Feed-flo' system is a triumph of modern design, it is supported by good, old fashioned engineering values. In short, craftsmanship and uncompromising build quality.

The use of high specification materials is also matched by thoughtful design. So, for instance, all bearings and drives mount direct to the chassis not the mixing chamber, greatly reducing operating stresses. At the same time, the bearings are kept away from corrosive feeds, ensuring a long and effective working life. Weighing accuracy is ensured by a four-point double chassis weighing system.

#### Paddle Mixing



#### Feed-flo Mixing



### Total Commitment

The effectiveness of the 'Feed-flo' system stems from the fact that it is not the result of a chance discovery, but the end product of almost 20 years development by an engineer that has played a key role in the development of complete diet feeding.

A livestock farmer by trade, Paddy Hughes imported his first diet feeder from America in 1975. Unreliable and unsuited to local conditions, the feeder proved disappointing and a quest for improvement began.

By 1981 Paddy was working for a specialist Irish feeder company and played an important role in designing the paddle-type feeder which dominated the market for almost a decade.

Still not content with performance, particularly mixing ability, Paddy again embarked on a new design programme, by now working for HiSpec Engineering. His determination bore fruit in 1989 with the launch of the HiSpec Mix Max Diet Feeder. An achievement marked just weeks later by the coveted Premier Machinery Award at the Royal Dublin Show.

"For almost two decades, different manufacturers fought to establish the superiority of augers against paddles and vice versa. In reality, as with most things, the answer lay in the middle with a design that combines the merits of each system - the rotary arm system."

YOUR LOCAL GILTRAP DEALER IS:

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